

Date: Thursday, 23/10/2008 10:54:00 AM
 User: Julie Dawson

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	LITTER TIE DOWN ASS'Y (LOCKING) - UNDER REVIEW
Job Number :	42883	Part Number :	D2360
Estimate Number :	10495	Drawing Number :	D2360/D2341
P.O. Number :		Project Number :	N/A
This Issue :	23/10/2008	Drawing Revision :	D / F
Prsht Rev. :	NC	Material :	
First Issue :	1 /	Due Date :	15/11/2008
Previous Run :	41338	Qty:	6 Um: Each
Written By :			
Checked & Approved By :	JLD 08.10.23		
Comment :	est rev H 07.06.12 ecn 825 EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6201	"T" Extrusion
-----	-------	---------------



Comment: Qty.: 1.1067 f(s)/Unit Total : ~~6.6402 f(s)~~ 5.5335

Material: D6201 (6061-T6 (QQ-A-200/8) 4" x 4" x 3/8" Thick 'T' extrusion)

Batch: 36793

N.A 08/10/25

2.0	BAND SAW	BAND SAW
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Comment: BAND SAW

Cut blanks: 12.65" Long

N.A 08/10/25

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

Machine as per Folio D2341 and Dwg D2341

2-Deburr

N.A 08/10/25

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

N.A 08/10/25

5.0	QC8	SECOND CHECK
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Comment: SECOND CHECK

N.A 08/10/27

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2360 PAR #: N/A Fault Category: Prod. Mach. NCR: Yes No DQA: 11 Date: 08.11.03
(D350-616-011/-013) Scrap / Scrap. QA: N/C Closed: 11 Date: 08/11/20

NCR: <u>42883</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
8/10/27	#30	During machining the counters a piece of the cast out got caught in between Distance 0.750" and 3.313 3.313." (see Dwg.)	CP 08.10.27 08/10/27	Scrap and Destroy. no people are extra work made	H.A 08/10/27	08/10/27	CP 08.10.27 08/10/27	S 08/10/27
		D2341 for highlight area Re: causing the part to bend and machine smaller. R.C. chips. Ditch clean out.	08/10/27	Fix Saw to prevent from happen again	08.10.27	08/10/27	08/10/27	S 08/10/27
		during machining		See last page for clarification	08.11.18.			S 08/10/27

NOTE: Date & initial all entries

Date: Thursday, 23/10/2008 10:54:01 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: LITTER TIE DOWN ASSY (LOCKING) - UNDER REVIEW

Job Number: 42883

Part Number: D2360

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



(5X)

Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

M.L

08/10/27

7.0

POWDER COATING

POWDER COATING



M109152

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

(5)

START TIME:

7:45

OVEN TEMPERATURE:

320°

FINISH TIME:

8:15

FL

08/10/28

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



94

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-10-28

RS

9.0

D2002015

Knob



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Knob

16177

CU

10.0

D2345

Lock Channel



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Lock Channel

16177 39474

CU

11.0

D2366

Lock Handle



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Inventory

37431

CU

12.0

D2367

Handle Knob



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Inventory

33794

CU 8/10/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 23/10/2008 10:54:01 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

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Job Number: 42883

Part Number: D2360

Job Number:



Seq. #:	Machine Or Operation:	Description :
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13.0	D2372	Quick Release
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)
Quick Release 41426

CV

14.0	D2373	Spring
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Spring 41427

CV

15.0	D2444	Pip Pin Assembly
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Pip Pin Assembly 41429

CV

16.0	AN526C1032R18	Screw
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Screw 101458

CV

17.0	AN960JD10	Washer
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)
Washer 109059

CV

18.0	AN960JD10L	Washer
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Comment: Qty.: 8.0000 Each(s)/Unit Total : 48.0000 Each(s)
Washer 1105793

CV

19.0	MS20470AD34	Rivet,Universal Head
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Rivet,Universal Head 15541

CV

20.0	MS21042L3	Nut
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Comment: Qty.: 3.0000 Each(s)/Unit Total : 18.0000 Each(s)
Nut 1109031

CV 10/28 (5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 23/10/2008 10:54:01 AM
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Job Number: 42883

Part Number: D2360

Job Number:



Seq. #:	Machine Or Operation:	Description :
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21.0	MS27039113	Screw
------	------------	-------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Screw M105211

22.0	MS27039115	Screw
------	------------	-------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)
Screw M108169

23.0	NAS679A3W	Nut
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Nut 1463

24.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL & MEDIUM FAB RESOURCE 1
Assemble as per dwg D2360

25.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

26.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1
Identify and Stock
Location: ST185

27.0	QC21	FINAL INSPECTION/W/O RELEASE
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Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W 08.11.03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 42883
Description: Litter Tie Down Bracket (Locking)		Part Number: D2341
Inspection Dwg: D2341	Rev: F	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.500	+/-0.010	1.503	✓			
1.000	+/-0.010	1.005	✓			
Ø0.242	+0.005/-0.001	Ø0.244	✓			
Ø0.191	+0.005/-0.001	Ø0.193	✓			
R0.250	+/-0.010	R0.250	✓			
1.700	+/-0.010	1.697	✓			
0.750	+/-0.010	0.754	✓			
2.750	+/-0.010	2.754	✓			
11.000	+/-0.005	11.001	✓			
5.500	+/-0.010	5.499	✓			
1.584	+/-0.010	1.588	✓			
Ø0.191	+0.005/-0.001	Ø0.191	✓			
2.610	+/-0.010	2.614	✓			
0.844	+/-0.010	0.844	✓			
1.250	+/-0.010	1.252	✓			
0.750	+/-0.010	0.749	✓			
12.500	+/-0.010	12.50	✓			
3.313	+/-0.010	3.316	✓			
4.250	+/-0.010	4.247	✓			
0.400	+/-0.010	0.3985	✓			

Measured by: G.A	Audited by: Jmf	Prototype Approval:	N/A
Date: 08/10/25	Date: 08/10/27	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.05.24	New Issue P/O D2360	KJ/JLM	
B	07.07.17	Dwg Rev. updated	KJ/JLM	BE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

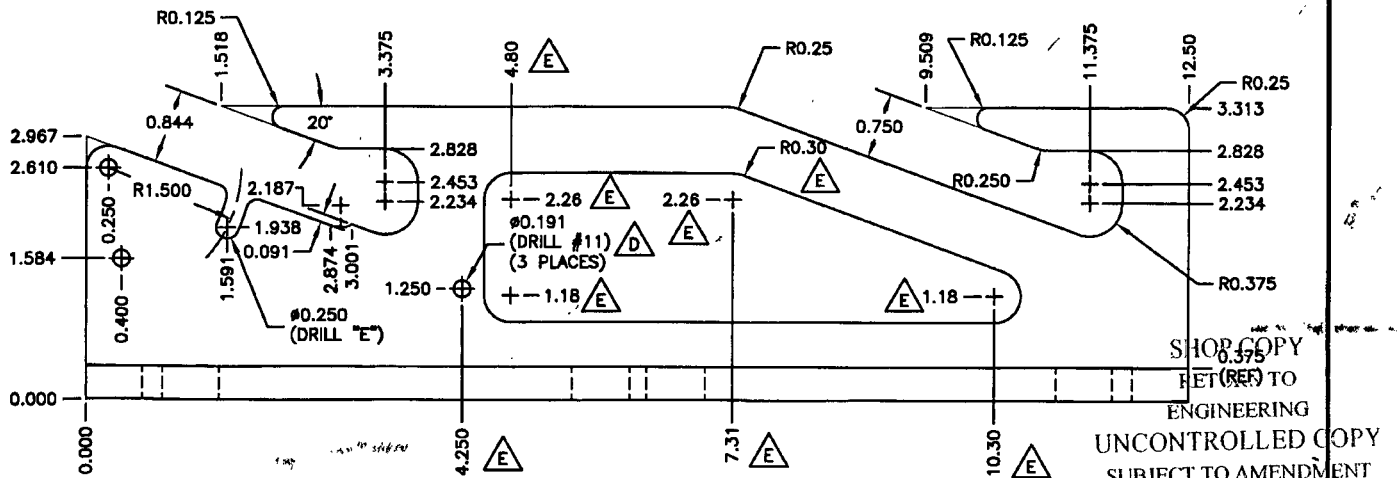
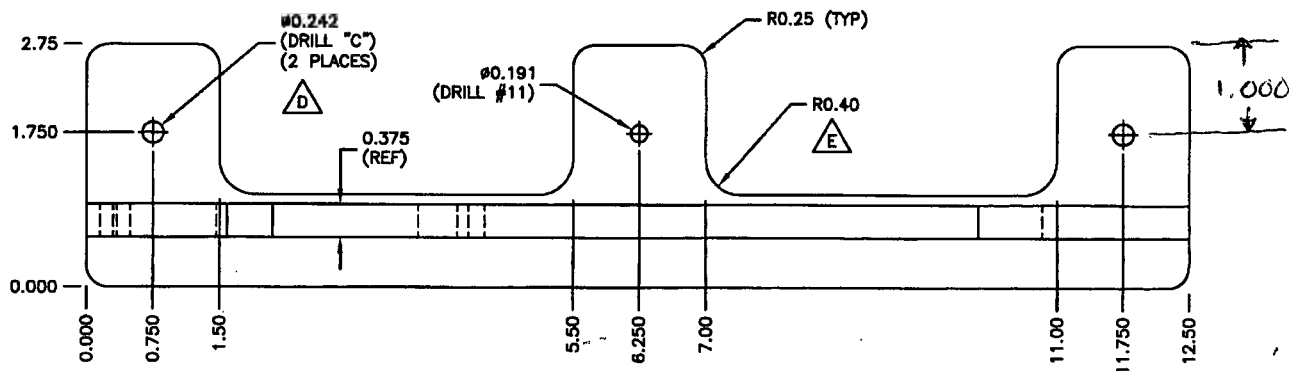
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN BW	DRAWN BY JC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D2341	REV. F SHEET 1 OF 1
DATE 07.06.07		TITLE LITTER TIE DOWN BRACKET (LOCKING)	SCALE 1:2
A	95.01.13	NEW ISSUE	
B	95.02.14	MODIFIED LOCK	
D	95.02.20	CHANGES TO DIAMETERS	
E	97.10.01	CHANGES FOR MACHINING	
F	07.06.07	REVISED NOTES; FINISH WAS ANODIZE	

**D2341 LITTER TIE DOWN BRACKET (LOCKING)**

- 1) MATERIAL: MAKE FROM D6201-0125 EXTRUSION (6061-T6/T651 PER QQ-A-200/B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (REF. 4.3.5.1) PER QSI 005 4.3
- 3) BREAK ALL SHARP EDGES TO 0.005 TO 0.010
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFY WITH DART P/N "D2341" USING FINE POINT PERMANENT INK MARKER

RELEASED

07-6-22

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN BW	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CE	APPROVED [Signature]	DRAWING NO. D2360	REV. D SHEET 1 OF 2
DATE 07.06.06		TITLE LITTER TIE DOWN ASSEMBLY (LOCKING) NTS	
A	95.02.10	NEW ISSUE	
B	95.02.20	RE-DESIGN	
C	97.08.27	ADD MS20470AD3-4 RIVET	
D	07.06.06	D2002-015 WAS D2376; SECTION B-B QTY(2) AN960JD10 WAS QTY(3) QTY(8) AN960JD10L WAS QTY(5)	

RELEASED

97.06.07 **[Signature]**

PARTS LIST:

QTY	PART NUMBER	DESCRIPTION
X	D2360	LITTER TIE DOWN ASSEMBLY (LOCKING)
1	D2341	LITTER TIE DOWN (LOCKING)
1	D2345	LOCK CHANNEL
2	D2366	LOCK HANDLE
1	D2367	KNOB (DELRIN)
2	D2372	QUICK RELEASE FASTENERS
1	D2373	SPRING
2	D2002-015	KNOB (DELRIN)
1	D2444	PIP PIN
1	AN526C1032R18	SCREW
2	AN960JD10	WASHER
8	AN960JD10L	WASHER
1	MS20470AD3-4	RIVET
3	MS21042L3	NUT (OR MS21042-3)
1	MS27039-1-13	SCREW
2	MS27039-1-15	SCREW
1	NAS679A3W	NUT



SHOP COPY
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WITHOUT NOTICE
WORK ORDER
NO. **42883**

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

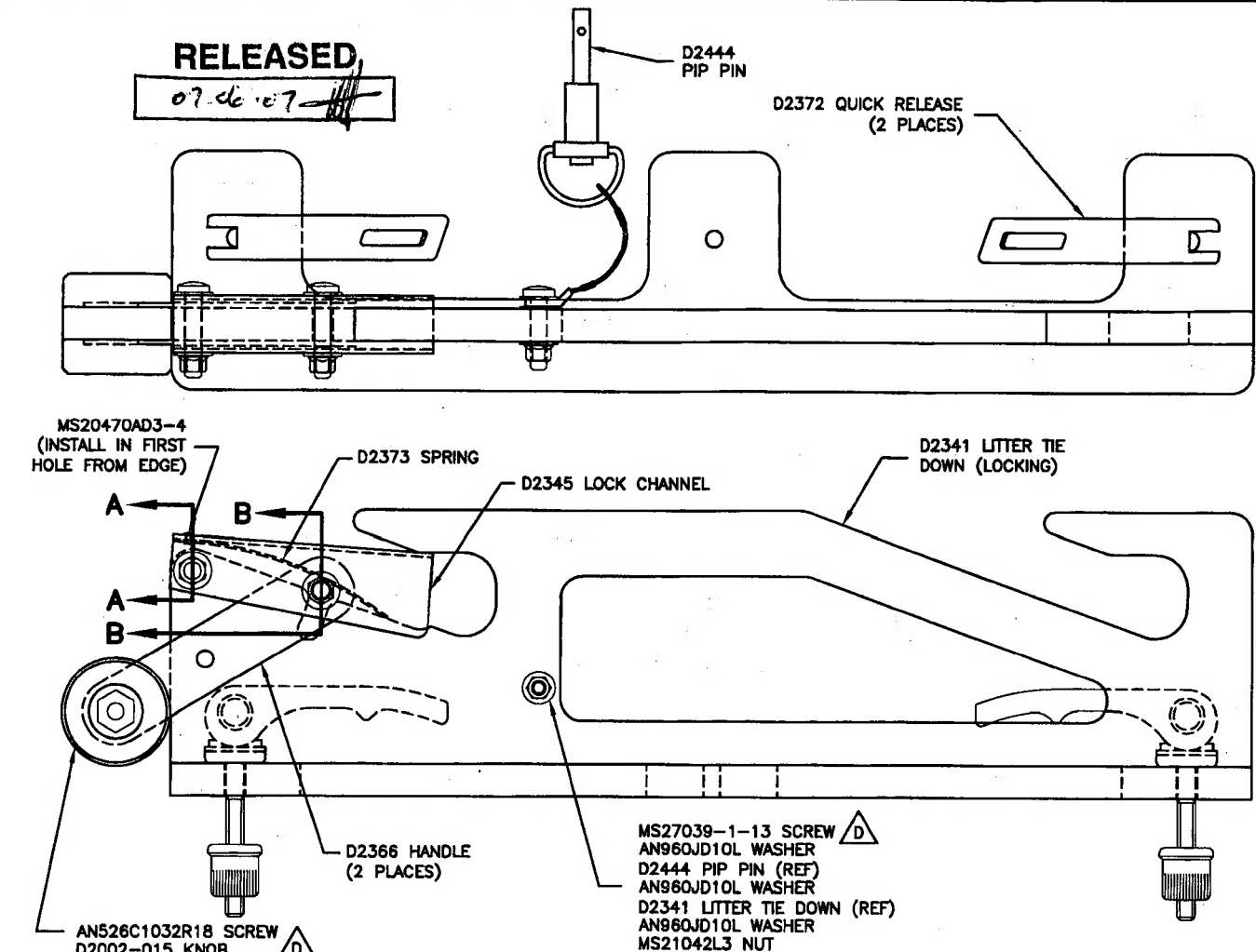
QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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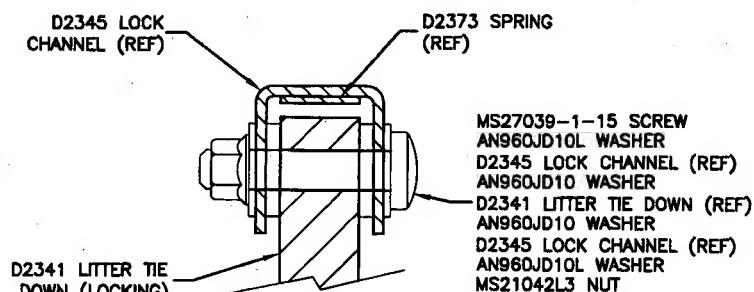
NOTE: Date & initial all entries

DART

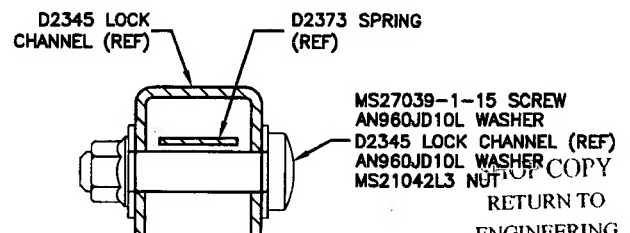
DESIGN BW	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CE	APPROVED [Signature]	DRAWING NO. D2360	REV. D SHEET 2 OF 2
DATE 07.06.06		TITLE LITTER TIE DOWN ASSEMBLY (LOCKING)	SCALE NTS



D2360 LITTER TIE DOWN ASSEMBLY (LOCKING)



SECTION A-A
(SCALE 1:1)



SECTION B-B
(SCALE 1:1)

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WORK ORDER
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No *See Back of First Page* DQA: _____ Date: *11/18*

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08-10-27	3.0	While machining the contour, a piece of the material, was caught between the part, and the tool at the 0.750" ± 3.313" location, causing the part to bend, and be machined smaller along the top. R.C. chips were building up during machining, inside the jaws on the vise. * Process *	<i>[Signature]</i> 06/11/18	Part was scrapped & no replace. A section of the jaws was machined out, to allow the chips to remove during machining, and not buildup.	<i>[Signature]</i> 06-11-18	<i>[Signature]</i> 06-11-18	<i>[Signature]</i> 06-11-18	<i>[Signature]</i> 06-11-18
			<i>[Signature]</i> 06/11/18		<i>[Signature]</i> 06-11-18	<i>[Signature]</i> 06-11-18	<i>[Signature]</i> 06-11-18	<i>[Signature]</i> 06-11-18

NOTE: Date & initial all entries